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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,672	03/04/2005	Hisashi Maeshima	4924-0109PUS1	3246

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EXAMINER

SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
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1796

NOTIFICATION DATE	DELIVERY MODE
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10/15/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/526,672

Applicant(s)

MAESHIMA ET AL.

Examiner

Robert Sellers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-29 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/4/2005 & 11/27/2006
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

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1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claims 1-5, drawn to a process for preparation of an alicyclic diepoxide of general formula (I) depicted in claim 1.

Group II, claims 6-10, drawn to a composition comprising the alicyclic diepoxide of general formula (I), a thermal cationic or photocationic polymerization initiator, and an optional additional epoxy resin.

Group III, claims 11-15, drawn to a composition comprising the alicyclic diepoxide of general formula (I), a curing agent, and, optionally, a curing accelerator, inorganic filler and/or an additional epoxy resin.

Group IV, claims 16-21, drawn to a stabilizer for an electrical insulating oil comprising the alicyclic diepoxide of general formula (I).

Group V, claim 22, drawn to an electrical insulating oil comprising an insulating oil ingredient and the alicyclic diepoxide of general formula (I).

Group VI, claims 23-29, drawn to a casting composition comprising the alicyclic diepoxide of general formula (I), an acid anhydride, a curing accelerator and an inorganic filler.

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2. The inventions listed as Groups I to VI do not relate to a single general inventive concept under PCT Rule 13.1 because they lack the same or corresponding special technical feature under PCT Rule 13.2. The special technical feature is the preparation of the alicyclic diepoxide of general formula (I) by epoxidizing an alicyclic diolefin of general formula (II) with an organic percarboxylic acid.

3. Takai Publication No. 2003/0059618 (equivalent to PCT Publication No. WO 02/76966 cited in the Information Disclosure Statement filed March 4, 2005 and designated as a P,X reference in the International Search Report filed on the same date) discloses a method of producing an alicyclic diepoxide of formula (I) by epoxidizing an alicyclic diolefin of formula (II) using an aliphatic percarboxylic acid (page 2, paragraphs 23 and 24) having a water content of 0.8% by weight or less (page 2, paragraph 26) such as peracetic acid (page 2, paragraph 27) obtained by the air oxidation of acetaldehyde (page 4, paragraph 49) in the presence of an inert solvent such as ethyl acetate (page 4, paragraphs 54 and 55 and page 14, paragraph 185, Production Example 1).

4. The special technical feature does not make a contribution over the prior art, thereby validating a holding of lack of unity.

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5. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

Contingent upon the election of Group II:

a) Either the thermal cationic initiator (b1), photocationic initiator (b2), or acid anhydride (C), wherein a particular chemical name or structure is identified.

b) The presence or absence of the additional epoxy resin (D), wherein if its presence is elected, a particular chemical name or structure is indicated.

Contingent upon the election of Group III:

c) The curing agent (b) wherein a particular chemical name or structure is identified.

d) The presence or absence of the curing accelerator (c), inorganic filler (d) and/or additional epoxy resin (e), wherein if its/their presence is elected, particular chemical name(s) or structure(s) are indicated.

Contingent upon the election of Group V:

e) The insulating oil ingredient wherein a particular chemical name or structure is indicated.

Contingent upon the election of Group VI:

f) The acid anhydride (B) wherein a particular chemical name or structure is identified.

g) The curing accelerator (C) wherein a particular chemical name or structure is indicated.

h) The inorganic filler (D) wherein a particular chemical name or structure is identified.

Applicant in reply to this action is required to elect a single species ***of each item under the particular elected group*** to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species MPEP § 809.02(a)).

Claims 6-21 and 23-29 are generic.

6. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because the species lack the same or corresponding special technical feature under PCT Rule 13.2 for the reasons espoused hereinabove with respect to the holding of lack of unity.

A telephone call was made to Marc S. Weiner on June 8, 2007 to request an oral election to the above restriction and election of species requirements, but did not result in elections being made.

The reply to this requirement to be complete must include (i) an election of an invention and species to be examined even though the requirement is traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention and species.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should the traverse be on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if one of the inventions or species is found to be unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention or species.

Upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. The Yu've et al. article cited in the Information Disclosure Statement filed March 4, 2005 has not been received.
8. Copending application no. 10/567,253 in claims 1 and 4 set forth a composition comprising an ester-free alicyclic diepoxide of Structural Formula (1) corresponding to claimed general formula (I), a cationic polymerization initiator and another epoxy compound relevant to instant claims 6-15.
9. Copending application no. 10/883,162 in claims 5-8 and 18-24 require a blend of an alicyclic diepoxide of formula (I) wherein X includes a single bond linking two alicyclic rings embracing claimed general formula (I) and a curing agent and curing accelerator pertinent to instant claims 6-15 and 23-29.
10. Japanese Patent No. 54-3006 and German Patent No. 1,418,465 (no abstract available) teaches the preparation of peracetic acid containing substantially no water by the air oxidation of aldehydes such as acetaldehyde as acknowledged in the paragraph bridging pages 26-27 of the instant specification.
11. Great Britain Patent No. 2,008,593 discloses the production of an epoxide from an olefin by oxidizing acetaldehyde to peracetic acid in an organic solvent (page 1, lines 48-56) such as ethyl acetate (page 1, lines 109-113 and page 3, Example 1).
12. Japanese Patent No. 5-239043 reports the epoxidation of cyclohexene with an ethyl acetate solution of peracetic acid (Derwent abstract).

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13. Japanese Patent No. 58-172387 discloses the epoxidation of an alicyclic diepoxide with an organic solvent solution of a C₃-C₄ percarboxylic acid possessing a water content of below 2 wt. %.
14. The translation for the Hau article cited in the Information Disclosure Statement filed November 27, 2006 on the last page describes the preparation of peracetic acid containing no water by oxidizing an aldehyde.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

/Robert Sellers/

Robert Sellers
Primary Examiner
Division 1796

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10/6/2007